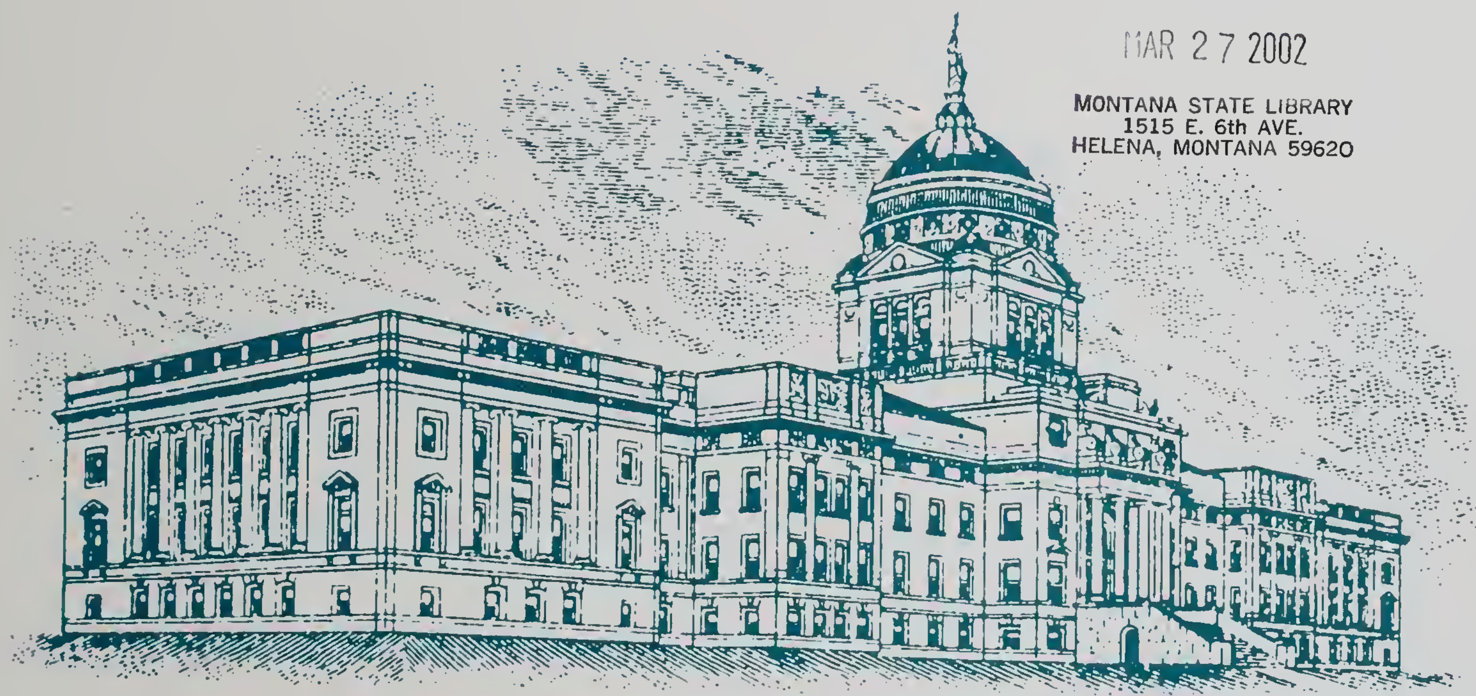
MONTANA

Teachers' Retirement System

Component Unit of the State of Montana



ANNUAL REPORT

FISCAL YEARS ENDED JUNE 30, 1997 AND 1996

Marc Racicot, Governor

TEACHERS' RETIREMENT SYSTEM

1500 E. SIXTH AVENUE
PO BOX 200139
HELENA, MONTANA 59620-0139 (406) 444-3134 MARC RACICOT, GOVERNOR

STATE OF MONTANA

October 24, 1997

Governor Marc Racicot
Room 204, State Capitol
Helena, MT 59620-0801

Dear Governor Racicot:

On behalf of the Montana Teachers' Retirement Board, it is my pleasure to submit to you the 1997 Annual Report for the Teachers' Retirement System.

In its 60th year of operation, the Montana Teachers' Retirement System has assets with a market value in excess of $1.7 billion. The growth in the Retirement System continues to be steady. At fiscal year end, the active membership exceeded 18,200 members and annuitants totaled over 7,900 receiving pension benefits in excess of $6.7 million per month.

The success of any organization is directly attributed to the dedication, commitment and proficiency of the personnel. I would like to take this opportunity to express my gratitude to the Board of Trustees, the staff, the advisors, and the many people who have worked to assure the successful operation and improvement of the financial soundness of the Montana Teachers' Retirement System.

Sincerely,

David L. Senn

David L. Senn
Executive Director

DLS/pc

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THE TEACHERS' RETIREMENT SYSTEM
DIRECTORS AND OFFICERS

BOARD OF DIRECTORS

JAMES COWAN CHAIRMAN	07-01-96 to 07-01-00
DR. RICK STUBER	07-01-94 to 07-01-98
E. JOSEPH CROSS	07-01-91 to 07-01-99
VIRGINIA EGLI	07-01-97 to 07-01-01
JAMES TURCOTTE	07-01-97 to 07-01-01
JIMA SEVERSON	07-01-97 to 07-01-01

ADMINISTRATIVE OFFICERS

DAVID L. SENN	Executive Director
GARY WARREN	Assistant Executive Director

PROFESSIONAL CONSULTANTS

MILLIMAN & ROBERTSON, INC.	Actuaries & Consultants Seattle, WA 98101

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REQUIRED SUPPLEMENTARY INFORMATION

LEGISLATIVE AUDIT DIVISION

Scott A. Seacat, Legislative Auditor
John W. Northey, Legal Counsel
Tori Hunthausen, IT & Operations Manager

Deputy Legislative Auditors:
Jim Pellegrini, Performance Audit
James Gillett, Financial-Compliance Audit

INDEPENDENT AUDITOR'S REPORT

We have audited the accompanying Statement of Plan Net Assets of the Teachers' Retirement System as of June 30, 1997 and 1996, and the related Statement of Changes in Plan Net Assets for each of the two fiscal years ended June 30, 1997 and 1996. The Information contained in these financial statements is the responsibility of the system's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosure in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Teachers' Retirement System for the fiscal years ended June 30, 1997 and 1996, and the results of its operations for the years then ended.

As described in note A to the financial statements, the Teachers' Retirement System's management implemented the Governmental Accounting Standards Board (GASB) Statement No. 28 Accounting and Financial Reporting for Securities Lending Transactions effective July 1, 1996. The financial statements for the year ended June 30, 1996 have been restated to reflect securities lending transactions in accordance with this new GASB statement.

The Schedule of Funding Progress and the Schedule of Employer Contributions are not part of the basic financial statements but are supplementary information required by the Governmental Accounting Standards Board. We have applied certain limited procedures, which consisted principally of inquiries of management regarding the methods of measurement and presentation of the supplementary information. However, we did not audit the information and express no opinion on it.

Respectfully submitted,

James Gillett

James Gillett, CPA
Deputy Legislative Auditor

October 6, 1997

Room 135, State Capitol Building PO Box 201705 Helena, MT 59620-1705
Phone (406) 444-3122 FAX (406) 444-9784 E-Mail lad@mt.gov

TEACHERS' RETIREMENT SYSTEM
COMPONENT UNIT OF THE STATE OF MONTANA
STATEMENT OF PLAN NET ASSETS
AS OF JUNE 30, 1997 AND 1996

	1997	1996 As Adj. (Note A)
ASSETS		
Current Assets:		
Cash	$ 1,323,491	$ 3,560,442
Cash Equivalents-Short Term Investment Pool (Note A)	50,337,040	43,594,322
Accounts Receivable	9,401,225	8,745,250
Interest Receivable	8,637,982	6,590,916
Total Current Assets	$ 69,699,738	$ 62,490,930
Investments, at fair value (Note A):		
Mortgages	$ 78,854,719	$ 57,367,433
Investment Pools	1,547,022,639	1,304,495,370
Other Investments	46,304,474	38,818,478
Total Investments	$1,672,181,832	$1,400,681,281
Securities Lending Collateral (Note A)	$ 193,935,870	$ 207,297,448
Other Assets:		
Land and Buildings	$ 193,844	$ 193,844
Less: Accum. Depreciation	(102,247)	(98,483)
Intangible Assets	79,580	96,512
Advances	186	0
Equipment	230,906	207,719
Less: Accum. Depreciation	(139,466)	(115,731)
Total Other Assets	$ 262,803	$ 283,861
TOTAL ASSETS	$1,936,080,243	$1,670,753,520
LIABILITIES		
Accounts Payable	$ 6,719,486	$ 331,917
Securities Lending Liability (Note A)	193,935,870	207,297,448
Compensated Absences (Note A)	34,869	35,609
Property Held in Trust	9,588	6,992
Installment Purchase Payable (Note E)	10,426	31,038
TOTAL LIABILITIES	$ 200,710,239	$ 207,703,004
NET ASSETS HELD IN TRUST FOR PENSION BENEFITS (Schedule of funding progress page 16)	$1,735,370,004	$1,463,050,516

The accompanying notes are an integral part
of these financial statements

TEACHERS' RETIREMENT SYSTEM
COMPONENT UNIT OF THE STATE OF MONTANA
STATEMENT OF CHANGES IN PLAN NET ASSETS
FOR THE FISCAL YEARS ENDED JUNE 30, 1997 AND 1996

	1997	1996 As Adj. (Note A)
ADDITIONS		
Contributions:		
Employer	$ 41,639,722	$ 40,626,732
Plan Member	40,348,306	39,174,350
Other	101,267	189,823
Total Contributions	$ 82,089,295	$ 79,990,905
Rental Income	$ 16,450	$ 16,450
Investment Income:		
Net Appreciation/(Depreciation) in fair value of investments	$ 191,159,724	$ 76,649,423
Investment Earnings	92,690,140	85,629,676
Total Investment Income	$ 283,849,864	$ 162,279,099
Less Investment Expense	1,149,170	719,212
Net Investment Income	$ 282,700,694	$ 161,559,887
Security Lending Income (Note A)	12,107,528	12,453,639
Less Security Lending Expense (Note A)	11,447,632	11,992,359
Total Security Lending Income	$ 659,896	$ 461,280
Total Net Investment Income	$ 283,360,590	$ 162,021,167
DEDUCTIONS		
Benefit Payments	$ 88,631,324	$ 83,763,230
Withdrawals	3,839,562	4,158,612
Administrative Expense (Note D)	675,961	684,885
Total Deductions	$ 93,146,847	$ 88,606,727
NET INCREASE IN PLAN NET ASSETS	$ 272,319,488	$ 153,421,795
NET ASSETS HELD IN TRUST FOR PENSION BENEFITS		
BEGINNING OF YEAR	1,463,050,516	1,309,628,721
END OF YEAR	$1,735,370,004	$1,463,050,516

The accompanying notes are an integral part of these financial statements.

NOTE A. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Accounting

The Teachers' Retirement System, a discretely presented component unit Pension Trust Fund of the State of Montana financial reporting entity, maintains its accounts on the full accrual basis of accounting. Employee and employer contributions are recognized as revenues in the period in which employee services are performed and expenses are recorded when the corresponding liabilities are incurred, regardless of when payment is made.

Valuation of Investments

Investments are reported at fair value. Short-term investments and state securities are recorded at cost which approximates fair value. Mortgages were decreased by unaccumulated mortgage discount of $44,587 in fiscal year 1997 and $17,657 in fiscal year 1996. No investment in any one organization represents 5% or more of the net assets available for pension benefits. Investment units are bought/sold on the first business day of each month upon the decision of the Board of Investment's (BOI) Chief Investment Officer.

The five areas of investment at June 30, 1997, include: Montana Stock Pool (Montcomp); Montana International Equity Pool (MTIP); Montana Short-Term Investment Pool (STIP); Retirement Funds Bond Pool (RFBP); and Other Investments.

1. Montcomp portfolio consists of common stock in public corporations. Montcomp's unit value is calculated daily based upon the market value of the equity holdings. Value at June 30,1997 was $611 per unit.

2. MTIP portfolio includes equity investments in three funds - BOI Internal International, Schroder Capital Management International and Yamaichi Capital Management, Inc. The three funds may invest in securities of foreign-based corporations listed on legal and recognized foreign exchanges as well as domestic exchanges. Security types may include ordinary common shares, preferred shares, convertible securities, American Depositary Receipts (ADR's), Global Depositary Receipts (GDR's) and other global securities, as appropriate. Unit values are calculated at the close of the last business day of each month based on the market value of the MTIP equity holdings, other assets and liabilities. Value at June 30, 1997 was $105 per unit.

3. STIP portfolio includes asset-backed securities, banker's acceptances, certificates of deposit, commercial paper, corporate and government securities, repurchase agreements and variable-rate instruments. Value at June 30, 1997 was $1 per unit.

4. RFBP portfolio includes corporate asset-backed, other corporate, government mortgage-backed, government and yankee bonds. Unit values are calculated weekly based on portfolio pricing. Value at June 30, 1997 was $103 per unit. Realized portfolio gains/losses are distributed at least annually. The RFBP portfolio includes structured financial instruments known as REMICs (Real Estate Mortgage Investment Conduits). REMICs are pass-through vehicles for multiclass mortgage-backed securities. Some REMICs are principal-only strips (POs) and interest-only (IOs). The Teachers' Retirement System has 40.47% ownership in the RFBP.

As of June 30, 1996, S&A Restaurants Corporation, a legal risk to the RFBP investments, was restructuring its debt. Due to possible bankruptcy if restructuring was not completed, the BOI discontinued accruing income on this security effective February 15, 1996. On August 1, 1996, the company completed its corporate restructuring. On August 15, 1996, the BOI received $613,250 in interest due for February 15 through August 14, 1996. Given the restructuring and receipt of the interest payment, the BOI permitted the security to accrue income. At amortized cost, the RFBP owns $11,000,000 par of S&A Restaurants Corporation, 11.15% First Mortgage Bonds, maturing August 15, 1998. These bonds are backed by U.S. government securities.

5. Other Investments represent leveraged buyouts and venture capital purchased by the Board of Investments. Venture capital represents private equity investments in early stage financing of rapidly growing companies with an innovative product or service. Leveraged buy-outs permit investment groups to acquire a company by leveraging debt, as a financing technique, to establish a significant ownership position on behalf of the company's current management team.

On January 22, 1996, the BOI, on behalf of the Teachers' and Public Employees Retirement Divisions, purchased the IBM Building located at 100 North Park Avenue for $4.8 million. The retirement divisions funded the building purchase on a 50/50 basis.

Compensated Absences

Compensated absences represent 100 percent of accrued vacation and 25 percent of accrued sick leave for Teachers' Retirement System personnel at June 30, 1997 and June 30, 1996.

Minnie Fullam Fund

The TRS financial statements include the Minnie Fullam (MF) Fund, a legacy fund that is administered by the Teachers' Retirement System. The Net Plan Assets as of June 30, 1997 and 1996, were $62,009 and $53,531 respectively.

Accounting and Reporting Changes

Restatement - In May, 1995, Governmental Accounting Standards Board (GASB) issued Statement No.28, Accounting and Financial Reporting for Securities Lending Transactions. This Statement establishes financial reporting standards for security lending transactions. The Statement requires the System to restate the financial statements of all periods presented showing the costs of security lending transactions separately instead of netted against related income.

In the Statement of Plan Net Assets as of June 30, 1996, Total Assets, as previously reported of $1,463,456,072, has been restated as $1,670,753,520 to include the gross Security Lending Collateral of $207,297,448. Total Liabilities changed from $405,556 to $207,703,004, due to the

Security Lending Liability of $207,297,448. The Net Assets Held in Trust for Pension Beneifts of $1,463,050,516 remains unchanged.

In the Statement of Changes in Plan Net Assets for fiscal year ended June 30, 1996, the Investment Earnings has been restated as $85,629,676. The Investment Earnings of $86,090,956, as previously recorded, included net security lending income of $461,280. The gross Security Lending Income of $12,453,639 and the Security Lending Expense of $11,992,359 are now reported. The Net Assets Held in Trust for Pension Benefits of $1,463,050,516 remains unchanged.

Security Lending - Under the provisions of state statutes, BOI, via, a Securities Lending Authorization Agreement authorized the custodial bank, State Street Bank and Trust, to lend the BOI securities to broker-dealers and other entities with a simultaneous agreement to return the collateral for the same securities in the future. During the period the securities are on loan, BOI receives a fee and the custodial bank must initially receive collateral equal to 102 percent of the market value of the loaned securities and maintain collateral equal to not less than 100 percent of the market value of the loaned security. BOI retains all rights and risks of ownership during the loan period.

During fiscal years 1997 and 1996, State Street lent, on behalf of BOI, certain securities held by State Street, as custodian, and received US dollar currency cash, US government securities, and irrevocable bank letters of credit. State Street does not have the ability to pledge or sell collateral securities unless the borrower defaults.

BOI did not impose any restrictions during fiscal years 1997 and 1996 on the amount of the loans that State Street made on its behalf. There were no failures by any borrowers to return loaned securities or pay distributions thereon during fiscal years 1997 and 1996. Moreover, there were no losses during fiscal years 1997 and 1996 resulting from a default of the borrowers or State Street.

During fiscal years 1997 and 1996, BOI and the borrowers maintained the right to terminate all securities lending transactions on demand. The cash collateral received on each loan was invested,, together with the cash collateral of other qualified plan lenders, in a collective investment pool, the Securities Lending Quality Trust. The relationship between the average maturities of the investment pool and BOI loans was affected by the maturities of the loans made by other plan entities that invested cash collateral in the collective investment pool, which BOI could not determine. On June 30, 1997 and June 30, 1996, BOI had no credit risk exposure to borrowers.

NOTE B. DESCRIPTION OF PLAN

The Teachers' Retirement Board is the governing body of a mandatory multiple-employer, cost-sharing defined benefit pension plan, which provides retirement services to all persons in Montana employed as teachers or professional staff of any public elementary or secondary school, colleges of technology or unit of the university system. The System was established by the State of Montana in 1937 and is governed by Title 19, chapter 20, of the Montana Code Annotated.

At June 30, 1997, the number and type of employers participating in the System was as follows:

Local School Districts	397
Community Colleges	3
University System Units	6
Colleges of Technology	3
State Agencies	6
Total	415

At June 30, 1997, the System membership consisted of the following:

Retirees and Beneficiaries Currently Receiving Benefits	7,901
Terminated Employees Entitled to But Not Yet Receiving Benefits	8,733
Current Members:	
Vested	11,837
Nonvested	6,385
Total Membership	34,856

The pension plan provides retirement benefits and death and disability benefits. Employees with a minimum of 25 years of service or who have reached age 60 with 5 years of service are eligible to receive an annual retirement benefit equal to 1.6667% times creditable service years times the average final compensation. Final compensation is the average of the highest three consecutive years of earned compensation. Benefits fully vest after 5 years of creditable service. Vested employees may retire at or after age 50 and receive reduced retirement benefits.

Effective January 1, 1988, university system employees eligible to participate in the Teachers' Retirement System could elect to participate in an Optional Retirement Plan established by the Board of Regents. As of July 1, 1997, a total of 2,442 university system employees have elected to participate in the Optional Retirement Plan. Effective July 1, 1993, membership in the Optional Retirement Plan is mandatory for new employees to the university system unless they are already a member of the Teachers' Retirement System.

Effective January 1, 1990, certain members of the Teachers' Retirement System are eligible to receive a post retirement adjustment (PRA). The PRA is funded only when annual investment earnings are in excess of the actuarially required rate, currently 8%. To be eligible, a retiree or beneficiary must be receiving a monthly benefit for 24 months preceding June 30 each year. There were no post retirement adjustments in fiscal years 1996 and 1997.

NOTE C. CONTRIBUTIONS

The TRS funding policy provides for monthly employer and employee contributions at rates specified by state law. Plan members are currently required to contribute 7.044% of their earned compensation and employers contribute 7.47% of earned compensation. An actuary determines the actuarial implications of the funding requirement in biennial actuarial valuations. The actuarial method used to determine the implications of the statutory funding level is the entry age normal funding method, with both normal cost and amortization of the accrued liability determined as a level percentage of payroll. The actuarial valuation prepared as of July 1, 1996, the most recent valuation date, indicates the statutory rate was sufficient to fund the normal cost and to amortize the unfunded accrued liability under the entry age normal method over 27.2 years. During fiscal years 1997 and 1996, no changes were made in the method used to calculate or establish contribution requirements, nor were there any changes in the law affecting benefits.

NOTE D. ADMINISTRATIVE EXPENSES

Administrative expenses for the years ended June 30, 1997 and 1996, are outlined below:

	1997	1996
Personal Services:		
Salaries	$274,159	$262,217
Other compensation	2,650	2,750
Employee benefits	70,430	69,725
Total Personal Services	$347,239	$334,692
Operating Expenses:		
Contracted services	$125,901	$154,730
Supplies and materials	16,296	23,145
Communications	33,724	38,566
Travel	10,745	12,168
Rent	24,294	24,294
Repair and maintenance	18,817	28,683
Other expenses	10,410	9,104
Interest Expense	2,493	5,223
Depreciation	27,499	22,762
Amortization	54,932	30,142
Interim Committee	3,611	1,376
Total Operating Expenses	$328,722	$350,193
Total Administrative Expense	$675,961	$684,885

NOTE E. INSTALLMENT PURCHASE PAYABLE

During fiscal year 1992, TRS contracted for a new data processing system. Sixty monthly payments of $5,092.08 began on November 29, 1992 and conclude October 29, 1997 for a total debt of $305,524.80 which includes principal and interest of $271,279.34 and $34,245.46 respectively.

Schedule of Funding Progress

(All dollar amounts in thousands)

Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liabilities (AAL)(1)	Unfunded Actuarial Accrued Liabilities (UAAL)(2)	Funded Ratio(3)	Covered Payroll(4)	UAAL as a Percentage of Covered Payroll(5)
July 1, 1992	$ 954,542	$1,533,883	$579,341	62.2%	$ 465,063	124.5%
July 1, 1994	1,157,512	1,712,933	555,421	67.6	472,860	117.4
July 1, 1996	1,376,716	1,939,569	562,853	71.0	501,516	112.2

(1) Actuarial present value of benefits less actuarial present value of future normal costs based on Entry Age Actuarial Cost Method.

(2) Actuarial accrued liabilities less actuarial value of assets.

(3) Funded ratio is the actuarial value of assets expressed as a percentage of the actuarial accrued liabilities. Generally, the higher the funded ratio the stronger the stability of the system.

(4) Covered Payroll includes compensation paid to all active employees on which contributions are calculated.

(5) UAAL is the excess of the actuarial accrued liabilities over the actuarial value of assets expressed as a percentage of covered payroll. Generally, as the UAAL ratio decreases, the stronger the stability of the system.

Schedule of Contributions from the Employer and Other Contributing Entities

(All dollar amounts in thousands)

Fiscal Year Ending	Covered Employee Payroll (1)	Actual Employer & Other Contributing Entities Contributions (2)	Actual Employer & Other Contributing Entities Contribution % (2)	Annual Required Contribution (ARC) % (3)	Annual Pension Cost (APC) (3)	Percentage of APC Contributed	Net Pension Obligation (3)
6/30/92	$465,063	$35,759	7.459%	7.459%	$35,759	100%	$0
6/30/93	493,614	38,088	7.459	7.459	38,088	100	0
6/30/94	472,860	39,164	7.4645 (4)	7.4645 (4)	39,164	100	0
6/30/95	486,809	39,073	7.47	7.47	39,073	100	0
6/30/96	501,516	40,627	7.47	7.47	40,627	100	0
6/30/97	511,934	41,640	7.47	7.47	41,640	100	0

(1) Computed as the dollar amount of the actual employer contribution made as a percentage of payroll divided by the contribution rate expressed as a percentage of payroll. Amounts before 1994 use the entire actual employer contribution.

(2) The actual and required employer contributions are expressed as a percentage of payroll. Contributions for termination pay are included in the actual employer contribution, but are not made as a set percentage of payroll. Effective Fiscal Year 1997, contributions made as a percentage of the salaries of the members in the Optional Retirement Plan (ORP) are included, prior years have been restated to include ORP contributions. In the Fiscal Year ended June 30, 1997, $1.4 million of ORP member salaries were contributed. The ORP contribution rate varies from year to year.

(3) All employer contributions are a percentage of actual payroll. Thus, as long as the percentage equals the percentage required by the most recent actuarial valuation, the dollar amount of the Annual Required Contributions (ARC) is equal to the actual dollar amount of the employer contributions. Since employers have always contributed on a basis equal to the ARC, the Annual Pension Cost (APC) is equal to the Annual Required Contributions (ARC) and the Net Pension Obligation (NPO) is zero.

(4) The employer contribution rate changed from 7.459% to 7.470% of pay at January 1, 1994. 7.4645% is the average of those rates.

TEACHERS' RETIREMENT SYSTEM
COMPONENT UNIT OF THE STATE OF MONTANA
NOTES TO THE SUPPLEMENTAL SCHEDULES
FISCAL YEARS ENDED JUNE 30, 1997 AND 1996

Actuarial Cost Method

The actuarial valuation was prepared using the entry age normal actuarial cost method. Under this method, the actuarial present value of the projected benefits of each individual included in the valuation is allocated as a level percentage of the individual's projected compensation between entry age and assumed exit. The portion of this actuarial present value allocated to a valuation year is called the normal cost. The normal cost was first calculated for each individual member. The normal cost rate was defined to equal the total of the individual normal costs, divided by the total pay rate as of July 1, 1996.

The portion of this actuarial present value not provided for at a valuation date by the sum of (a) the actuarial value of the assets and (b) the actuarial present value of future normal costs is called the unfunded actuarial liability. The unfunded actuarial liability is amortized as a level percentage of the projected salaries of present and future members of the System.

Valuation of Assets - Actuarial Basis

The difference between the total market value of assets and the cost value of assets is added to the cost value on a 3-year smoothed basis.

Investment Earnings

The annual rate of investment earnings of the assets of the System is assumed to be 8% per year, compounded annually.

Postretirement Benefit Increases

No future postretirement benefit increases are assumed.

Inflationary factor

Assumed at 6%.

Factors that significantly affect the identification of trends

No significant factors.

Future Salaries

The composite rate of future salary increases is assumed to be 6.5% per year, compounded annually. This is the sum of a 6.0% general wage increase assumption and an assumption of 0.5% individual salary increase due to promotion and longevity. Adopted July 1, 1994.

Amortization Period

The current employer contribution rate, 7.47% of members' salaries, is sufficient to meet the actuarial cost of the System accruing at the valuation date and to amortize the unfunded actuarial liability over 27.2 years. The actuarial costs are calculated using the entry age actuarial cost method.

The 1996 actuarial valuation indicates that an actuarial gain occurred during the fiscal year just ended, primarily due to higher market value of assets than expected, as reflected in the 14.1% net investment return on a market value basis and 9.6% on an actuarial basis for the past year. The effect of the asset gain and other experience on the open amortization period can be distributed approximately as follows:

<u>Amortization Period Remaining at July 1, 1996</u>

Expected from July 1, 1994 Valuation		29.7 years
Effect of Changes in Benefits and Contribution Rates		none
Effect of Changes in Actuarial Assumptions		<1.4>
Expected Amortization Period		28.3 years
Effect of Actuarial Experience Gains and Losses:		
Investments (Gain)	<2.8>	
Loss from Other Causes	+1.7	<1.1>
Actual Amortization Period Remaining at July 1, 1996		+ 27.2 years

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ACTUARIAL SECTION

ANALYSIS OF VALUATION

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2. SCOPE OF THE REPORT
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5. EMPLOYER CONTRIBUTIONS
6. ACTUARIAL INFORMATION FOR ACCOUNTING PURPOSES

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Teachers' Retirement System
State of Montana

Section 1

Summary of the Findings

As a result of the actuarial valuation of the benefits in effect under the Montana Teachers' Retirement System as of July 1, 1996, we recommend that the current employer contribution rate, 7.47% of members' salaries, remain in effect.

This rate is sufficient to meet the actuarial cost of the System accruing at the valuation date and to amortize the unfunded actuarial liability over 27.2 years. The actuarial costs are calculated using the entry age actuarial cost method.

The 1996 actuarial valuation indicates that an actuarial gain occurred during the fiscal year just ended, primarily due to higher market value of assets than expected, as reflected in the 14.1% net investment return on a market value basis and 9.6% on an actuarial basis for the past year. The effect of the asset gain and other experience on the amortization period can be distributed approximately as follows:

<u>Amortization Period Remaining at July 1, 1996</u>

Expected from July 1, 1994 Valuation		29.7 years
Effect of Changes in Benefits and Contribution Rates		none
Effect of Changes in Actuarial Assumptions		M 1.4
Expected Amortization Period		28.3 years
Effect of Actuarial Experience Gains and Losses:		
Investments (Gain)	M 2.8	
Loss from Other Causes	+ 1.7	M 1.1
Actual Amortization Period Remaining at July 1, 1996		+ 27.2 years

Teachers' Retirement System
State of Montana

Section 2

Scope of the Report

This report presents the actuarial valuation of the Montana Teachers' Retirement System as of July 1, 1996.

A summary of the findings resulting from this valuation is presented in the previous section. Section 3 describes the assets of the System. A summary of the assets is set forth in Table 1. Sections 4 and 5 describe how the obligations of the System are to be met under the actuarial cost method in use.

Section 6 discloses actuarial information based on the requirements of Statement No. 25 of the Governmental Accounting Standards Board.

The actuarial procedures and assumptions used in this valuation are described in Appendix A.

The current benefit structure, as determined by the provisions of the governing law on July 1, 1996, is summarized in Appendix B. Schedules of valuation data classifying the data used in the valuation by various categories of contributing members, former contributing members, and beneficiaries make up Appendix C.

Appendix D provides a brief summary of the System's recent experience. Comparative statistics are presented on the System's membership and contribution rates. Appendix E is a glossary of actuarial terms used in this report.

In preparing our report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, statutory provisions, employee data, and financial information. The participant data used for the valuation were submitted by the staff on computer disks. In our examination of these data, we found them to be reasonably consistent and comparable with data used in prior valuations.

We believe the actuarial assumptions used in the valuation, as summarized in Appendix A, are reasonably related to the experience of the System. The assumptions for the active members have been revised to be consistent with those recommended in our recent study of the System's experience and adopted by the Board for the July 1, 1996 actuarial valuation. The assumptions represent our best estimate of future conditions affecting the System.

In choosing the assumptions and preparing this report, we have conformed to generally

recognized and accepted actuarial principles and practices that are consistent with the principles prescribed by the Actuarial Standards Board (ASB) and the Code of Professional Conduct and Qualification Standards for Public Statements of Actuarial Opinion of the American Academy of Actuaries.

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Section 3

Assets

In many respects, an actuarial valuation can be regarded as an inventory process. The inventory is taken as of the actuarial valuation date, which for this valuation is July 1, 1996. On that date the assets available for the payment of benefits are appraised. These assets are compared with the actuarial liabilities, which are generally well in excess of the assets. The actuarial process thus leads to a method of determining what contributions by members and their employers are needed to strike a balance.

For the July 1, 1989 valuation, the prior actuary adopted a new asset valuation method based on a three-year smoothing between the System's cost value and market value. The same method, except using a four-year smoothing period, is currently being used by the Montana Public Employee Retirement System. We recommend that the current smoothing method be retained, but reviewed for reasonableness from year to year.

The total assets of the System are reduced by a minor portion that is set aside for the payment of current liabilities. The Fullam Fund is also excluded. The resulting net assets equal the total fund balance available for the payment of benefits.

Table 1 summarizes the actuarial value of the net assets available for benefits on July 1, 1996, based on the method adopted by the Board for the July 1, 1989 valuation. The actuarial value of net assets is 94.1% of the market value as of July 1, 1996.

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Table 1

Summary of Assets

	Total Fund Balances					
	Cost Value	Market Value	Cumulative Unrealized Gain	Increase During Year	Smoothing Weights	Smoothed Portions of Gain
July 1, 1994	$ 999,593,170	$1,136,361,547	$ 136,768,377	$ 136,768,377	100.00%	$ 136,768,377
July 1, 1995	1,067,057,530	1,309,630,221	242,572,691	105,804,314	66.67	70,536,209
July 1, 1996	1,143,883,484	1,463,038,942	319,155,458	76,582,767	33.33	25,527,589
						$ 232,832,175

Actuarial Assets

July 1, 1996 Cost Value	$1,143,883,484
Smoothed Portion of Gain	232,832,175
July 1, 1996 Actuarial Value	$1,376,715,659

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Section 4

Actuarial Liabilities

In the previous section, an actuarial valuation was related to an inventory process, and an analysis was given of the inventory of assets of the System as of the valuation date, July 1, 1996. In this section, the discussion will focus on the commitments of the System, which will be referred to as its actuarial liabilities.

Table 2 contains an analysis of the actuarial present value of all future benefits for contributing members, for former contributing members, and for beneficiaries. The analysis is given by type of benefit and by sex.

The actuarial liabilities summarized in Table 2 include the actuarial present value of all future benefits expected to be paid with respect to each member. For an active member, this value includes a measure of both benefits already earned and future benefits to be earned. Thus, for all members, active and retired, the value extends over benefits earnable and payable for the rest of their lives and, if an optional benefit is chosen, for the lives of their surviving beneficiaries.

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Table 2

Actuarial Present Value of Future Benefits for Contributing Members, Former Contributing Members, and Beneficiaries
July 1, 1996

(All amounts are actuarial present values in millions)

	Male	Female	Total
A. Active members			
Service retirement	$ 579.4	$ 745.0	$1,324.4
Disability retirement	11.4	17.9	29.3
Survivors' benefits	31.8	14.4	46.2
Vested Retirement	10.9	21.1	32.0
Refund of Member Contributions	13.9	23.6	37.5
Total	$ 647.4	$ 822.0	$1,469.4
B. Inactive members and annuitants			
Service retirement	$ 455.4	$ 300.8	$ 756.2
Disability retirement	6.2	7.5	13.7
Beneficiaries*	7.9	44.9	52.8
Vested terminated members	12.6	16.6	29.2
Nonvested terminated members	2.9	7.6	10.5
Total	$ 485.0	$ 377.4	$ 862.4
C. Grand Total	$1,132.4	$1,199.4	$2,331.8

**Includes survivors of active and retired members, and children's benefits.*

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Section 5

Employer Contributions

In the previous two sections, attention has been focused on the assets and actuarial liabilities of the System. A comparison of Tables 1 and 2 indicates that there is a shortfall in current assets to meet the total actuarial liabilities. This is the universal experience in all but a fully closed-down fund where no further contributions of any sort are anticipated.

In an active system, there will always be a difference between the actuarial liabilities and the assets. This difference has to be funded with future contributions and investment returns. An actuarial valuation sets a schedule of future contributions that will deal with this funding in an orderly fashion.

The method used to determine the incidence of the contributions in various years is called the actuarial cost method. For this valuation, the entry age actuarial cost method has been used. Under this method, or essentially any actuarial cost method, the contributions required to meet the difference between current assets and current actuarial liabilities are allocated each year between two elements:

- A normal cost amount, which ideally is relatively stable as a percentage of salary over the years; and

- Whatever amount is left over, which is used to amortize what is called the unfunded actuarial liability.

The two items described above, normal cost and unfunded actuarial liability, are the keys to understanding the actuarial cost method. Let us first discuss the normal cost.

The normal cost is the theoretical contribution rate which will meet the ongoing costs of a group of average new employees. Suppose that a group of new employees were covered under a separate fund from which all benefits and to which all contributions and associated investment return were to be paid. Under the entry age actuarial cost method, the normal cost contribution rate is that level percentage of pay which would be exactly right to maintain this fund on a stable basis. If experience were to follow the actuarial assumptions exactly, the fund would be completely liquidated with the last payment to the last survivor of the group.

We have determined the normal cost rates separately by type of employee and by type of benefit under the System. These are summarized in Table 3. The normal costs as of July 1, 1994 and July 1, 1996 include .031% to fund the additional cost of the changes to the Vietnam service credit.

The term "fully funded" is often applied to a system where contributions for everyone at the normal cost rate will fully pay for the benefits of existing as well as new employees. More often than not, systems are not fully funded, either because of benefit improvements in the past that have not been completely paid for or actuarial deficiencies that have occurred because experience has not been as favorable as anticipated. Under these circumstances, an unfunded actuarial liability (UAL) exists.

Table 4 shows how the UAL was derived for the System. Lines A and B show, respectively, the total present value of future benefits and the portion of the future liability that is expected to be paid from future normal cost contributions, both employer and employee. Line C shows the actuarial liability: the portion of the present value of future benefits not provided by future normal cost contributions. Line D shows the assets available for benefits. Finally, Line E shows the unfunded actuarial liability.

As can be seen from this discussion, a key consideration in the adequacy of the funding of the System is how the UAL is being amortized. Table 5 shows that the current employer and member contribution rates are adequate to pay the total normal cost rate (9.328% of pay), with enough left over to amortize the UAL in 27.2 years. Therefore, the current basis is sufficient to meet future requirements.

The amortization of the UAL assumes continued contributions of 2.503% of pay for members of the Optional Retirement Plan (ORP) until June 30, 2027. The 1993 legislation modified the ORP contribution rate to be set at 2.503% from July 1, 1993 through June 30, 1997, and, effective July 1, 1997 through June 30, 2033, an adjusted rate will be determined based on the actual experience of the members of the Montana University System. Until the adjusted rate is determined, we have assumed contributions of 2.503% are payable until June 30, 2027, 40 years after the establishment of the ORP in accordance with the initial ORP funding requirements.

The unfunded actuarial liability at any date after establishment of a system is affected by any actuarial gains or losses arising when the actual experience of the system varies from the experience anticipated by the actuarial assumptions used in the valuations. To the extent actual experience as it develops differs from the assumptions used, so also will the actual emerging costs differ from the estimated costs.

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Table 3

Normal Cost Contribution Rates
As Percentages of Salary

	July 1, 1996			July 1, 1994
	Male	Female	Total	Total
Service retirement	5.675%	7.028%	6.465%	6.687%
Disability retirement	0.176	0.244	0.216	0.265
Survivors' benefits	0.412	0.179	0.276	0.280
Vested retirement	0.528	0.559	0.546	0.560
Refund of member contributions	1.987	1.709	1.825	1.702
Total	8.778%	9.719%	9.328%	9.494%

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Table 4

Unfunded Actuarial Liability
(All dollar amounts in millions)

	July 1, 1996	July 1, 1994
A. Actuarial present value of all future benefits for present and former members and their survivors (Table 2)	$ 2,331.8	$ 2,088.1
B. Less actuarial present value of total future normal costs for present members	392.2	375.2
C. Actuarial liability	$ 1,939.6	$ 1,712.9
D. Less actuarial value of assets available for benefits (Table 1)	1,376.7	1,157.5
E. Unfunded actuarial liability	$ 562.9*	$ 555.4*

**Of this amount, approximately $29.1 million will be paid by contributions to TRS of 2.503% of the salaries of the participants in the Optional Retirement Plan (ORP).*

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Table 5

Recommended Contribution Rates
As Percentages of Salary

	July 1, 1996	July 1, 1994
A. Employer contribution rate	7.470%	7.470%
B. Member contribution rate	7.044	7.044
C. Total contribution rate	14.514%	14.514%
D. Less total normal cost rate (Table 3)	9.328	9.494
E. Amount available to amortize unfunded actuarial liability*	5.186%	5.020%
F. Amortization period from July 1, 1996	27.2 years	29.7 years**

* *In addition, 2.503% of the salaries of the participants in the Optional Retirement Plan (ORP) is available to help amortize the unfunded actuarial liability.*

***The amortization period as of July 1, 1994 was 31.7 years; thus, the expected period as of July 1, 1996 is 29.7 years.*

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Section 6

Actuarial Information for Accounting Purposes

For fiscal years beginning after June 15, 1996, new GASB reporting standards are required for defined benefit pension plans reporting and disclosures (Statement No. 25). The System is adopting the new reporting standards beginning in 1996.

The new reporting requirements for Statement No. 25 include certain supplementary information to the financial statements. These include:

- A schedule of funding progress, and
- A schedule of employer contributions.

The Schedule of Funding Progress compares actuarial assets and liabilities of the System, based on the actuarial funding method used. The required Schedule of Employer Contributions compares the employer contributions required based on the actuarial valuation (the actuarial required contribution, or ARC) with those employer contributions actually made. The ARC must be calculated based on certain parameters required for disclosure purposes. We believe the current actuarial methods and assumptions used in this valuation to determine the employer's contribution for funding purposes satisfy the new GASB reporting requirements.

GASB Statement No. 27 is effective for fiscal years beginning after June 15, 1997, for pension accounting by state and local governmental employers. The System is adopting this standard beginning in 1996. The disclosures include the measurement of an annual pension cost (APC). For the Fund, the APC is equal to the employer's annual required contributions (ARC), as actuarially determined by the funding methods and assumptions. Table 8 shows both the ARC and APC.

The comparability of the data from year to year can be affected by changes in actuarial assumptions, benefit provisions, accounting policies, etc. The actuarial assumptions were revised between the July 1, 1992 and the July 1, 1994 actuarial valuations and again between the July 1, 1994 and the July 1, 1996 valuations.

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Table 6

Schedule of Funding Progress
(All dollar amounts in millions)

Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liabilities(AAL)[1]	Unfunded Actuarial Accrued Liabilities (UAAL)[2]	Funded Ratio	Covered Payroll[3]	UAAL as a Percentage of Covered Payroll
July 1, 1992	$ 954.5	$ 1,533.9	$ 579.4	62.2%	$ 465.1	124.5%
July 1, 1994	1,157.5	1,712.9	555.4	67.6	472.9	117.4
July 1, 1996	1,376.7	1,939.6	562.9[4]	71.0	501.5	112.3

(1) Actuarial present value of benefits less actuarial present value of future normal costs based on entry age actuarial cost method.

(2) Actuarial accrued liabilities less actuarial value of assets.

(3) Covered Payroll includes compensation paid to all active employees on which contributions are calculated. Covered Payroll differs from the Active Member Valuation Payroll shown in Table C-1, which is an annualized compensation of only those members who were full-time active members on the actuarial valuation date.

(4) Note that although the UAAL increased from 1994 to 1996, the Covered Payroll increased more. Therefore, both the UAAL as a Percentage of Covered Payroll and the amortization period for the UAAL shown on Table 5 decreased.

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Table 7

Solvency Test
(All dollar amounts in millions)

Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liabilities for (A) Active Member Contributions	(B) Retirees and Beneficiaries	(C) Active Members (Employer Financed Portion)	Portion of Actuarial Accrued Liabilities Covered by Assets (A)	(B)	(C)
July 1, 1992	$ 954.5	$ 407.4	$ 622.0	$ 504.5	100.0%	88.0%	0.0%
July 1, 1994	1,157.5	459.8	768.6	484.5	100.0	90.8	0.0
July 1, 1996	1,376.7	541.4	862.4	535.8	100.0	96.9	0.0

Schedule of Contributions from the Employer and Other Contributing Entities

(All dollar amounts in thousands)

Fiscal Year Ending	Covered Employee Payroll [1]	Actual Employer & Other Contributing Entities Contributions [2]	Actual Employer & Other Contributing Entities Contribution % [2]	Annual Required Contribution (ARC) % [3]	Annual Pension Cost (APC) [3]	Percentage of APC Contributed	Net Pension Obligation [3]
6/30/92	$465.1	$35.8	7.459%	7.459%	$35.8	100%	$0
6/30/93	493.6	38.1	7.459	7.459	38.1	100	0
6/30/94	472.9	39.2	7.4645 [4]	7.4645 [4]	39.2	100	0
6/30/95	486.8	39.1	7.47	7.47	39.1	100	0
6/30/96	501.5	40.6	7.47	7.47	40.6	100	0
6/30/97	511.9	41.6	7.47	7.47	41.6	100	0

(1) Computed as the dollar amount of the actual employer contribution made as a percentage of payroll divided by the contribution rate expressed as a percentage of payroll. Amounts before 1994 use the entire actual employer contribution.

(2) The actual and required employer contributions are expressed as a percentage of payroll. Contributions for termination pay are included in the actual employer contribution, but are not made as a set percentage of payroll. Contributions made as a percentage of the salaries of the members in the Optional Retirement Plan (ORP) are included. In the Fiscal Year ended June 30, 1997, $1.4 million of ORP member salaries were contributed. The ORP contribution rate varies from year to year.

(3) All employer contributions are a percentage of actual payroll. Thus, as long as the percentage equals the percentage required by the most recent actuarial valuation, the dollar amount of the Annual Required Contributions (ARC) is equal to the actual dollar amount of the employer contributions. Since employers have always contributed on a basis equal to the ARC, the Annual Pension Cost (APC) is equal to the Annual Required Contributions (ARC) and the Net Pension Obligation (NPO) is zero.

(4) The employer contribution rate changed from 7.459% to 7.470% of pay at January 1, 1994. 7.4645% is the average of those rates.

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Appendix A

Actuarial Procedures and Assumptions

The actuarial assumptions used in this valuation were adopted by the Board for the July 1, 1996 Actuarial Valuation. The assumptions were changed as a result of our Investigation of Experience, July 1, 1990 - June 30, 1995. These assumptions are summarized in Table A-1.

Tables A-2 through A-5 give rates of decrement for service retirement, disablement, mortality, and other terminations of employment. These rates of decrement are referred to in actuarial literature as the absolute rate of decrement, or q'_x. Table A-6 shows the assumed probability of immediate refund of contributions among members terminating with five or more years of service.

Actuarial Cost Method

The actuarial valuation was prepared using the entry age actuarial cost method. Under this method, the actuarial present value of the projected benefits of each individual included in the valuation is allocated as a level percentage of the individual's projected compensation between entry age and assumed exit. The portion of this actuarial present value allocated to a valuation year is called the normal cost. The normal cost was first calculated for each individual member. The normal cost rate was defined to equal the total of the individual normal costs, divided by the total pay rate as of July 1, 1996.

The portion of this actuarial present value not provided for at a valuation date by the sum of (a) the actuarial value of the assets and (b) the actuarial present value of future normal costs is called the unfunded actuarial liability. The unfunded actuarial liability is amortized as a level percentage of the projected salaries of present and future members of the System.

Records and Data

The data used in the valuation consist of financial information; records of age, sex, service, salary, contribution rates, and account balances of contributing members; and records of age, sex, and amount of benefit for retired members and beneficiaries. All of the data were supplied by the System and are accepted for valuation purposes without audit.

Replacement of Terminated Members

The ages at entry and distribution by sex of future members are assumed to average the same as those of the present members they replace. If the number of active members should increase, it is further assumed that the average entry age of the larger group will be the same, from an actuarial standpoint, as that of the present group. Under these assumptions, the normal cost rates for active members will not vary with the termination of present members.

Employer Contributions

At the time of this valuation, the total employer contribution rate for normal costs and amortization of the unfunded actuarial liability was 7.470% of members' salaries.

Administrative Expense

The administrative expenses of the System are assumed to be funded by investment earnings in excess of 8% per year.

Valuation of Assets - Cost Basis

Bonds:	Bonds are valued at amortized book value.
Mortgages:	Mortgages are valued at par value.
Common Stocks:	Each issue of common stock is valued at cost.
Other Assets:	Other assets are carried on a book (cost) basis.

Premiums and discounts are amortized using the straight-life method over the life of the securities (8 years for mortgages).

Valuation of Assets - Actuarial Basis

The difference between the total market value of assets and the cost value of assets is added to the cost value on a 3-year smoothed basis.

Investment Earnings

The annual rate of investment earnings of the assets of the System is assumed to be 8% per year, compounded annually.

Interest on Member Contributions

Interest on member contributions is assumed to accrue at a rate of 7% per annum, compounded annually.

Postretirement Benefit Increases

No future postretirement benefit increases are assumed.

Future Salaries

The composite rate of future salary increases is assumed to be 6.5% per year, compounded annually. This is the sum of a 6.0% general wage increase assumption and an assumption of 0.5% individual salary increase due to promotion and longevity. This assumption was adopted July 1, 1994.

Service Retirement

Table A-2 shows the annual assumed rates of retirement among members eligible for service retirement. Separate rates are used when a member is eligible for reduced benefits, for the first year a member is eligible for full benefits, and for the years following the first year a member is eligible for full benefits. The rates for General Members were adopted July 1, 1994. The rates for University Members were adopted July 1, 1996.

Disablement

The rates of disablement used in this valuation are illustrated in Table A-3. These rates were adopted July 1, 1996.

Mortality

The mortality rates used in this valuation are illustrated in Table A-4. A written description of each table used is included in Table A-1.

Other Terminations of Employment

The rates of assumed future withdrawal from active service for reasons other than death, disability or retirement are shown for representative ages in Table A-5. These rates were adopted July 1, 1996.

Benefits for Terminating Members

Members terminating with less than five years of service are assumed to request an immediate withdrawal of their contributions with interest. Table A-6 shows the assumed probability of immediate refund of contributions among members terminating with five or more years of service. These rates were adopted July 1, 1996.

The data provided for some of the current terminated vested members included their accrued benefit. We calculated the present value of future benefits for these members and compared it with their available contribution account and took the larger value. We then estimated the present value of future benefits for all other terminated vested members based on their available contribution account.

Part-Time Employees

The valuation data for active members identify part-time members, but give no indication as to the number of hours worked. As done in the past, we imputed a "part-time percentage" by comparing the pay received with their annual equivalent full-time salary. Part-time members earning less than $1,000 during the last year were valued at their current member contribution balance.

Optional Retirement Program

The total contribution received based on ORP payroll for the fiscal year ending June 30, 1996 was $1,197,250. Based on a contribution rate of 2.503%, we assumed the total ORP payroll for the fiscal year to be $47,832,601 ($1,197,250 divided by 2.503%). This is consistent with the total of the ORP payroll field in the member data provided us, $47,829,505.

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Table A-1

Summary of Valuation Assumptions July 1, 1996

I. Economic assumptions

A.	General wage increases*	6.00%
B.	Individual salary increase due to promotion and longevity	0.50%
C.	Investment return	8.00%
D.	Growth in membership	0.00%
E.	Postretirement benefit increases	0.00%
F.	Interest on member accounts	6.00%

II. Demographic assumptions

A.	Retirement (General Member assumptions adopted July 1, 1994) (University Member assumptions adopted July 1, 1996)	Table A-2
B.	Disablement (adopted July 1, 1996)	Table A-3
C.	Mortality among contributing members 1983 Group Annuity Mortality (GAM) Table, with ages set back two years	Table A-4
D.	Mortality among service retired and disabled members and beneficiaries 1983 GAM Table, with ages set back one year.	Table A-4
E.	Otner terminations of employment (adopted July 1, 1996)	Table A-5
F.	Probability of retaining membership in the System upon vested termination (adopted July 1, 1996)	Table A-6

**Montana University System (MUS) members are assumed to have a 0.63% higher average final compensation due to extra service near retirement.*

State of Montana

Table A-2

Retirement

Annual Rates

Age	General Members: Eligible for Reduced Benefits	General Members: First Year Eligible for Full Benefits	General Members: Thereafter	University Members: Eligible for Reduced Benefits	University Members: First Year Eligible for Full Benefits	University Members: Thereafter
50	5.0%	15.4%	10.0%	2.5%	9.5%	4.9%
51	5.3	15.6	10.0	2.7	9.5	4.9
52	5.6	15.8	10.0	3.0	9.5	6.8
53	6.0	16.1	10.0	3.2	9.5	6.8
54	6.3	16.4	10.0	3.4	14.0	6.8
55	6.7	16.9	12.5	3.7	15.7	6.8
56	7.1	17.5	12.5	4.2	18.2	6.8
57	7.6	18.2	12.5	4.4	18.6	7.7
58	8.0	19.2	12.5	4.9	19.2	8.6
59	8.5	20.4	12.5	5.4	20.4	10.4
60	*	22.0	20.0	*	22.0	12.2
61		22.0	20.0		22.0	14.0
62		22.0	20.0		22.0	18.2
63		22.0	20.0		22.0	14.0
64		22.0	20.0		22.0	18.2
65		22.0	20.0		22.0	26.1
66		22.0	20.0		22.0	22.2
67		22.0	20.0		22.0	22.2
68		22.0	20.0		22.0	22.2
69		22.0	20.0		22.0	22.2
70		**	**		**	**

**All benefits are unreduced after attaining age 60.*
***Immediate retirement is assumed at age 70 or over.*

Table A-3

Disablement

Annual Rates

Age	General Members	University Members
25	.009%	.003%
30	.018	.006
35	.036	.012
40	.063	.021
45	.108	.036
50	.164	.055
55	.248	.083
60	.377	.126

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Table A-4

Mortality

Annual Rates*

Age	Men	Women
25	.05%	.03%
30	.06	.03
35	.09	.05
40	.12	.07
45	.22	.10
50	.39	.16
55	.61	.25
60	.92	.42
65	1.56	.71
70	2.75	1.24
75	4.46	2.40
80	7.41	4.29
85	11.48	6.99

**Rates shown are set back one year for retirees and two years for active members.*

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Table A-5

Other Terminations of Employment
Among Members Not Eligible to Retire

Annual Rates

Age	General and University Members
25	22.22%
30	13.95
35	8.30
40	5.84
45	4.19
50	3.60
55	3.02
60	2.67

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Table A-6

Probability of Retaining Membership in the System Upon Vested Termination

Age	Probability of Retaining Membership
25	60%
30	60
35	60
40	60
45	63
50	71
55	75

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Appendix B

Summary of Benefit Provisions

Effective Date	September 1, 1937
Vesting Period	5 years. No benefits are payable unless the member has a vested right, except the return of employee contributions with interest.
Final Compensation	Average of highest 3 consecutive years of earned compensation.
Normal Form of Benefits	Life only annuity. All benefits cease upon death; however, in no event will the member receive less than the amount of employee contributions with interest.
Normal Retirement Benefits	
Eligibility:	25 years of service or age 60 and 5 years of service.
Benefit:	The retirement benefit is equal to 1.6667% of final compensation for each year of service.
Early Retirement Benefits	
Eligibility:	5 years of service and age 50.
Benefit:	The retirement benefit is calculated in the same manner as described for normal retirement, but the benefit is reduced 1/2 of 1% for each of the first 60 months early and 3/10 of 1% for each of the next 60 months early.
Death Benefit	
Eligibility:	5 years of service.
Benefit:	The death benefit is equal to 1.6667% of final

	compensation for each year of service accrued at date of death, with an actuarial adjustment based on the relation of the member's age at death to the beneficiary's age. A monthly benefit of $200 is paid to each child until age 18. In addition, a lump-sum benefit of $500 is paid upon the death of an active or retired member.
Disability Benefit	
Eligibility:	5 years of service.
Benefit:	The disability benefit is equal to 1.6667% of final compensation for each year of service accrued at date of disability. The minimum benefit is 1/4 of the final compensation.
Withdrawal Benefits	With less than 5 years of service, the accumulated employee contributions with interest are returned. With more than 5 years, the member may elect a refund of contributions with interest or leave the contributions and interest in the System and retain a vested right to retirement benefits.
Tax Sheltered Annuity	The System sponsors a tax-deferred annuity program for the benefit of its members. The policies of this program have been established in accordance with the guidelines set by the Internal Revenue Service. The benefits provided by this program are determined solely by the value of the member's account (voluntary contributions plus interest) using actuarial tables provided by the Retirement Board.
Contributions	Member: 7.044% of compensation. Employer: 7.470% of compensation.
Cost-of-Living Adjustments	Each year the Board determines if the total investment income earned on the retirement fund for the fiscal year is sufficient to pay a permanent cost-of-living adjustment to certain retired members. If an adjustment is granted, it is considered actuarially funded by the system and is included in the next actuarial valuation in the determination of the actuarially required contribution rates.

Teachers' Retirement System
State of Montana

Appendix C

Valuation Data

This valuation is based upon the membership of the System as of July 1, 1996. Membership data were supplied by the System and accepted for valuation purposes without audit. However, tests were performed to ensure that the data are sufficiently accurate for valuation purposes.

Table C-1 contains summaries of the data for contributing members. For full-time members, values shown in the tables are the numbers of members and their total and average annual salaries. For part-time members, only the numbers of members are shown. All information is shown separately for males and females.

Members	Full-Time Members	Part-Time Members*	Total Contributing Members*	Annual Full-Time Salaries in Thousands
Male	5,083	748	5,831	$ 185,943
Female	8,168	3,401	11,569	238,142
Total	13,251	4,149	17,400	$ 424,085

**Excludes 1,295 part-time members with salaries under $1,000.*

Table C-2 presents distributions of the following:

- Members receiving service retirement benefits.
- Members receiving disability retirement benefits.
- Survivors of deceased retired members receiving benefits.
- Survivors of deceased active members.
- Child beneficiaries.
- Terminated vested members.

The valuation also includes liabilities attributable to members who have terminated employment but have not withdrawn their contributions. There are 6,479 such members who

are not vested and 1,152 such members who are vested. These counts include 480 records provided in the active data with salary equal to zero.

Type of Annuitant	Number	Annual Benefits in Thousands
Service Retirement		
Male	3,034	$ 46,340
Female	3,769	33,533
Disability Retirement		
Male	71	610
Female	128	783
Survivors of Deceased Retired Members		
Male	83	420
Female	408	3,196
Survivors of Deceased Active Members		
Male	106	462
Female	255	1,906
Child Beneficiaries	42	101
Total Annuitants	7,896	$ 87,351

Teachers Retirement System - State of Montana
Active Members - Full Time
Distribution Of Employees and Salaries as of July 1, 1996

Number of Employees - By Age Group - Males

	Completed Years of Service												
Age	0	1	2	3 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40+	Totals
< 25	7	12	4										23
25 to 29	41	98	84	100	35								358
30 to 34	16	43	46	105	210	28							448
35 to 39	8	32	33	53	178	205	47						556
40 to 44	4	33	30	49	142	176	265	116					815
45 to 49	11	23	21	52	115	153	204	464	142	2			1,187
50 to 54	10	9	9	27	62	75	94	201	419	75			981
55 to 59	6	6	2	17	34	40	39	59	142	145	27		517
60 to 64		2	4	4	16	16	11	8	35	44	27	2	169
65 to 69				1	1	7	4		5	4	2	1	25
70 and up	1						1		2				4
Totals	104	258	233	408	793	700	665	848	745	270	56	3	5,083

Annual Salaries in Thousands - By Age Group - Males

	Completed Years of Service												
Age	0	1	2	3 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40+	Totals
< 25	66	247	88										401
25 to 29	219	2,023	1,829	2,402	886								7,358
30 to 34	188	930	1,082	2,636	5,692	924							11,453
35 to 39	45	743	812	1,440	5,389	7,052	1,826						17,307
40 to 44	43	858	736	1,404	4,495	6,403	10,159	4,679					28,777
45 to 49	175	773	525	1,632	3,897	6,192	8,493	18,871	5,994	74			46,625
50 to 54	103	262	270	868	2,138	3,172	4,129	8,911	18,327	3,292			41,471
55 to 59	82	188	47	572	1,206	1,548	1,872	2,617	7,040	6,661	1,145		22,977
60 to 64		50	99	263	810	739	438	316	1,721	2,291	1,258	90	8,073
65 to 69				41	45	313	258		254	293	93	73	1,371
70 and up	2						48		80				130
Totals	924	6,073	5,487	11,257	24,558	26,343	27,222	35,393	33,417	12.611	2,495	163	185,943

Table C-1
(Continued)

Teachers Retirement System - State of Montana
Active Members - Full Time
Distribution Of Employees and Salaries as of July 1, 1996

Average Annual Salary - By Age Group - Males

Age	Completed Years of Service												
	0	1	2	3 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40+	Totals
< 25	9,470	20,561	22,059										17,446
25 to 29	5,334	20,638	21,773	24,017	25,305								20,552
30 to 34	11,753	21,636	23,516	25,108	27,105	33,015							25,565
35 to 39	5,668	23,224	24,599	27,161	30,274	34,400	38,858						31,127
40 to 44	10,689	26,011	24,529	28,658	31,654	36,381	38,336	40,334					35,309
45 to 49	15,913	33,616	24,984	31,385	33,891	40,470	41,631	40,670	42,209	37,123			39,280
50 to 54	10,327	29,087	29,959	32,138	34,484	42,297	43,921	44,335	43,739	43,888			42,274
55 to 59	13,743	31,301	23,489	33,653	35,473	38,696	47,990	44,353	49,580	45,936	42,396		44,444
60 to 64		24,795	24,809	65,648	50,601	46,171	39,803	39,459	49,176	52,076	46,576	44,903	47,770
65 to 69				40,700	45,316	44,654	64,513		50,896	73,332	46,607	72,836	54,820
70 and up	1,848						47,991		40,236				32,578
Totals	8,882	23,541	23,550	27,591	30,968	37,632	40,935	41,737	44,855	46,708	44,562	54,214	36,581

Table C-1
(Continued)

Teachers Retirement System - State of Montana
Active Members - Full Time
Distribution Of Employees and Salaries as of July 1, 1996

Number of Employees - By Age Group - Females

	Completed Years of Service												
Age	0	1	2	3 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40+	Totals
< 25	17	54	16										87
25 to 29	36	161	161	253	96								707
30 to 34	22	80	65	161	366	85							779
35 to 39	18	69	63	135	305	361	119						1,070
40 to 44	30	97	64	142	342	336	407	144					1,562
45 to 49	26	53	50	121	410	361	327	479	152				1,979
50 to 54	11	24	19	60	200	186	192	224	200	64			1,180
55 to 59	1	11	8	19	57	70	95	114	109	57	30		571
60 to 64	3	3	1	1	17	22	27	45	42	31	12	4	208
65 to 69		2	1	2	4	2	3	1	1	1	2	2	21
70 and up			1		1				1			1	4
Totals	164	554	449	894	1,798	1,423	1,170	1,007	505	153	44	7	8,168

Annual Salaries in Thousands - By Age Group - Females

	Completed Years of Service												
Age	0	1	2	3 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40+	Totals
< 25	96	996	302										1,394
25 to 29	243	3,057	3,163	5,262	2,216								13,941
30 to 34	177	1,506	1,371	3,544	9,009	2,508							18,115
35 to 39	122	1,147	1,381	3,064	7,751	11,003	4,010						28,479
40 to 44	204	1,799	1,329	3,154	9,291	10,487	14,018	5,225					45,507
45 to 49	230	1,052	1,120	2,967	11,180	11,782	11,510	18,086	5,757				63,684
50 to 54	35	423	394	1,472	5,500	6,065	7,135	8,382	7,690	2,472			39,569
55 to 59	4	212	197	409	1,457	2,309	3,440	4,169	4,126	2,134	1,189		19,646
60 to 64	19	61	14	26	413	691	925	1,601	1,597	1,131	490	176	7,144
65 to 69		19	1	32	105	55	123	32	22	36	60	66	552
70 and up			8		14				45			45	112
Totals	1,130	10,273	9,279	19,930	46,936	44,900	41,163	37,496	19,237	5,773	1,739	287	238,142

Table C-1
(Continued)

Teachers Retirement System - State of Montana
Active Members - Full Time
Distribution Of Employees and Salaries as of July 1, 1996

Average Annual Salary - By Age Group - Females

	Completed Years of Service												
Age	0	1	2	3 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40+	Totals
< 25	5,659	18,451	18,850										16,025
25 to 29	6,748	18,985	19,644	20,799	23,085								19,718
30 to 34	8,041	18,825	21,097	22,013	24,613	29,506							23,254
35 to 39	6,769	16,630	21,925	22,693	25,414	30,479	33,700						26,616
40 to 44	6,799	18,543	20,764	22,211	27,165	31,211	34,443	36,286					29,134
45 to 49	8,848	19,849	22,399	24,522	27,268	32,636	35,200	37,757	37,877				32,180
50 to 54	3,191	17,633	20,736	24,537	27,499	32,609	37,163	37,419	38,449	38,630			33,533
55 to 59	3,888	19,252	24,581	21,540	25,564	32,989	36,215	36,571	37,855	37,434	39,627		34,407
60 to 64	6,349	20,499	14,199	25,554	24,317	31,395	34,254	35,588	38,028	36,468	40,869	43,907	34,348
65 to 69		9,730	855	16,098	26,274	27,413	40,989	32,488	22,020	36,094	29,890	33,107	26,285
70 and up			8,094		13,595				44,945			45,098	27,933
Totals	6,890	18,544	20,667	22,293	26,104	31,553	35,182	37,235	38,094	37,730	39,523	40,991	29,156

Table C-1
(Continued)

Teachers Retirement System - State of Montana
Active Members - Part Time
Distribution Of Employees and Salaries as of July 1, 1996

Number of Employees - By Age Group - Males

	Completed Years of Service												
Age	0	1	2	3 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40+	Totals
< 25	26	10											36
25 to 29	125	35	15	7	4								186
30 to 34	17	11	6	17	6	5							62
35 to 39	10	18	7	14	7	7	5						68
40 to 44	21	9	5	12	27	13	10	2					99
45 to 49	22	14	5	14	17	12	14	26	9				133
50 to 54	5	3	8	10	10	7	7	10	13	7			80
55 to 59	5	1	1	2	2	2	2	5	14	9	6		49
60 to 64	2	3	2	4		2	1	1	2	4	2		23
65 to 69		2	1		1	2	1			1		1	9
70 and up				1		1			1				3
Totals	233	106	50	81	74	51	40	44	39	21	8	1	748

Number of Employees - By Age Group - Females

	Completed Years of Service												
Age	0	1	2	3 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40+	Totals
< 25	58	25	11	1									95
25 to 29	81	94	56	50	19								300
30 to 34	70	51	39	57	56	24							297
35 to 39	78	108	67	107	97	76	33						566
40 to 44	88	119	86	134	162	66	63	33					751
45 to 49	79	91	53	124	190	77	53	52	16				735
50 to 54	32	35	32	59	96	43	35	23	21	6			382
55 to 59	10	8	21	16	40	28	25	21	7	1			177
60 to 64	5	6	5	6	17	7	12	9	1				68
65 to 69	1	2	1	3	6	3	3						19
70 and up	1		1	1	3	4	1						11
Totals	503	539	372	558	686	328	225	138	45	7	0	0	3,401

Total of Above	4,149
Part Time Participants with Salary Less Than $1,000	1,295
Total Part Time Participants	5,444

Table C-2

Teachers Retirement System - State of Montana
Distribution of Inactive Lives

Members Receiving Service Retirement Benefits as of July 1, 1996

Age	Number of Persons		Annual Benefits in Thousands		Average Annual Benefits	
	Male	Female	Male	Female	Male	Female
<50	37	21	714	382	19,291	18,211
50 to 54	251	162	4,343	2,232	17,302	13,776
55 to 59	462	287	8,323	3,952	18,014	13,770
60 to 64	653	479	11,560	5,725	17,703	11,952
65 to 69	567	557	9,095	6,184	16,040	11,102
70 to 74	475	456	6,520	4,070	13,727	8,925
75 to 79	281	555	3,377	4,212	12,018	7,589
80 to 84	168	508	1,530	3,081	9,107	6,065
85 to 89	88	449	584	2,201	6,631	4,901
90 and up	52	295	295	1,495	5,682	5,067
Total	3,034	3,769	46,340	33,533	15,274	8,897

Members Receiving Disability Retirement Benefits as of July 1, 1996

Age	Number of Persons		Annual Benefits in Thousands		Average Annual Benefits	
	Male	Female	Male	Female	Male	Female
<50	11	13	81	91	7,352	6,986
50 to 54	6	9	62	71	10,363	7,853
55 to 59	11	18	104	130	9,422	7,240
60 to 64	11	14	76	107	6,911	7,652
65 to 69	13	15	129	103	9,885	6,839
70 to 74	7	13	64	64	9,148	4,921
75 to 79	10	20	77	94	7,710	4,679
80 to 84	2	13	17	61	8,708	4,701
85 to 89		6		27		4,576
90 and up		7		35		5,023
Total	71	128	610	783	8,588	6,116

Table C-2
(continued)

Teachers Retirement System - State of Montana
Distribution of Inactive Lives

Survivors of Deceased Retired Members as of July 1, 1996

Age	Number of Persons		Annual Benefits in Thousands		Average Annual Benefits	
	Male	Female	Male	Female	Male	Female
<50	11	10	53	55	4,780	5,530
50 to 54	6	8	30	84	5,042	10,443
55 to 59	8	19	35	168	4,424	8,854
60 to 64	10	36	71	396	7,148	11,001
65 to 69	2	44	20	451	10,006	10,260
70 to 74	13	75	75	623	5,790	8,301
75 to 79	8	69	41	509	5,099	7,382
80 to 84	15	64	56	468	3,713	7,310
85 to 89	7	49	32	280	4,597	5,706
90 and up	3	34	7	163	2,230	4,782
Total	83	408	420	3,196	5,064	7,835

Survivors of Deceased Active Members as of July 1, 1996

Age	Number of Persons		Annual Benefits in Thousands		Average Annual Benefits	
	Male	Female	Male	Female	Male	Female
<50	34	55	113	239	3,312	4,342
50 to 54	11	26	36	203	3,291	7,825
55 to 59	8	28	33	293	4,170	10,465
60 to 64	12	23	82	162	6,804	7,054
65 to 69	16	39	73	384	4,547	9,839
70 to 74	12	36	71	372	5,903	10,327
75 to 79	6	21	26	111	4,353	5,308
80 to 84	4	10	17	50	4,137	5,035
85 to 89	1	11	4	63	4,235	5,718
90 and up	2	6	8	28	3,919	4,667
Total	106	255	462	1,906	4,360	7,473

Teachers Retirement System - State of Montana
Distribution of Inactive Lives

Terminated Vested Members as of July 1, 1996
Number of Persons

Age	Male	Female	Total
<25			0
25 to 30	1	8	9
30 to 35	14	52	66
35 to 40	39	110	149
40 to 45	58	154	212
45 to 50	106	172	278
50 to 55	87	134	221
55 to 60	71	92	163
60 to 65	22	21	43
65 and up	5	6	11
Total	403	749	1,152

Child Beneficiaries as of July 1, 1996 *
Number of Persons

Age	Number
<5	2
5 to 6	1
7 to 8	3
9 to 10	0
11 to 12	7
13 to 14	11
15 to 16	11
17 and up	7
Total	42

* Child Beneficiaries all receive $200 per month, for a total of $100,800 per year.

Teachers' Retirement System
State of Montana

Appendix D

Comparative Schedules

This section contains tables that summarize the experience of the System shown in present and past valuation reports.

Table D-1 shows a summary of the active members and the annuitants covered as of the various valuation dates.

Table D-2 summarizes the contribution rates determined by each annual actuarial valuation.

Teachers' Retirement System State of Montana
Table D-1
Membership Data

Valuation Date (July 1)	Active Members: Full-Time Members	Part-Time Members	Total Contributing Members	Annual Full-Time Salaries in Thousands	Average Full-Time Annual Salary	Average Age	Average Years of Service
1987	13,105	1,955	15,060	$340,481	$25,981	*	*
1989	12,546	2,541	15,087	339,866	27,090	*	*
1992	13,502	3,141	16,643	401,092	29,706	42.4	11.6
1994	14,938	2,637	17,575	416,968	27,914	42.5	11.0
1996	13,251	5,444	18,695	424,085	32,004	43.3	11.6

Valuation Date (July 1)	Annuitants: Number	Annual Benefits in Thousands	Average Annual Benefit
1987	6,036	$43,236	$7,163
1989	6,330	49,546	7,827
1992	6,927	63,483	9,165
1994	7,530	78,183	10,383
1996	7,896	87,351	11,063

**Not available.*

Teachers' Retirement System State of Montana

Table D-2

Contribution Rates

Valuation Date	Normal Cost Rate		UAL	Total	Total
(July 1)	Employee	Employer	Rate	Employer Rate	Rate
1989*	7.044%	1.783%	5.676%	7.459%	14.503%
1992	7.044%	2.832%	4.627%	7.459%	14.503%
1994	7.044%	2.450%	5.020%	7.470%	14.514%
1996	7.044%	2.284%	5.186%	7.470%	14.514%

**Valuation performed by Hendrickson, Miller & Associates, Inc.*

Teachers' Retirement System
State of Montana

Appendix E

Glossary

The following definitions are largely excerpts from a list adopted in 1981 by the major actuarial organizations in the United States. In some cases the definitions have been modified for specific applicability to the Teachers' Retirement System Retirement System. Defined terms are capitalized throughout this Appendix.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement, and retirement; changes in compensation, rates of investment earnings, and asset appreciation or depreciation; procedures used to determine the Actuarial Value of Assets; and other relevant items.

Actuarial Cost Method

A procedure for determining the Actuarial Present Value of pension plan benefits and expenses and for developing an actuarially equivalent allocation of such value to time periods, usually in the form of a Normal Cost and an Actuarial Liability.

Actuarial Gain (Loss)

A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions during the period between two Actuarial Valuation dates, as determined in accordance with a particular Actuarial Cost Method.

Actuarial Present Value

The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions.

Actuarial Valuation

The determination, as of a valuation date, of the Normal Cost, Actuarial Liability, Actuarial Value of Assets, and related Actuarial Present Values for a pension plan.

Actuarial Value of Assets

The value of cash, investments and other property belonging to a pension plan, as used by the actuary for the purpose of an Actuarial Valuation.

Actuarially Equivalent

Of equal Actuarial Present Value, determined as of a given date with each value based on the same set of Actuarial Assumptions.

Amortization Payment

That portion of the pension plan contribution which is designed to pay interest on and to amortize the Unfunded Actuarial Liability.

Entry Age Actuarial Cost Method

A method under which the Actuarial Present Value of the Projected Benefits of each individual included in an Actuarial Valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit ages. The portion of this Actuarial Present Value allocated to a valuation year is called the Normal Cost. The portion of this Actuarial Present Value not provided for at a valuation date by the Actuarial Present Value of future Normal Costs is called the Actuarial Liability.

Normal Cost

That portion of the Actuarial Present Value of pension plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method.

Actuarial Liability

That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of pension plan benefits and expenses which is not provided for by future Normal Costs.

Unfunded Actuarial Liability

The excess of the Actuarial Liability over the Actuarial Value of Assets.

Accrued Benefit

The amount of an individual's benefit (whether or not vested) as of a specific date, determined in accordance with the terms of a pension plan and based on compensation and service to that date.

Projected Benefits

Those pension plan benefit amounts which are expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age and past and anticipated future compensation and service credits.

Unaccrued Benefit

The excess of an individual's Projected Benefits over the Accrued Benefits as of a specified date.

STATISTICAL SECTION

REVENUES BY SOURCE

EXPENSES BY TYPE

CONTRIBUTION RATES

ACTIVE MEMBERSHIP

RETIRED MEMBERSHIP

LOCATION OF BENEFIT RECIPIENTS

Revenues By Source

Year	Employee Contributions	Employer Contributions	Investment Income	Other	Total
1987 - 1988	$28,800,383	$28,324,488	$51,877,012		$109,001,883
1988 - 1989	28,995,301	28,657,283	58,742,650		116,395,234
1989 - 1990	30,549,466	30,646,428	63,748,295		124,944,189
1990 - 1991	32,611,152	33,274,827	67,033,563		132,919,542
1991 - 1992	34,677,311	35,759,120	70,680,973		141,117,404
1992 - 1993	37,249,490	38,088,280	78,375,511		153,713,281
1993 - 1994	38,748,884	39,164,487	73,076,482		150,989,853
1994 - 1995	37,782,158	39,071,610	72,498,507	127,416	149,479,691
1995 - 1996	39,174,350	40,626,732	98,083,315	189,823	178,074,220
1996 - 1997	40,348,306	41,639,722	104,797,668	101,267	186,886,963

Expenses By Type

Year	Benefit Payments	Withdrawals	Admin. Expenses (1)	Investment Expenses	Other	Total
1987 - 1988	$44,001,287	$6,994,554	$443,786	$310,975		$51,750,602
1988 - 1989	47,214,491	5,213,596	474,560	179,743		53,082,390
1989 - 1990	51,033,464	8,561,498	520,926	166,134		60,282,022
1990 - 1991	54,869,861	4,243,421	485,918	191,692		59,790,892
1991 - 1992	60,763,611	3,307,312	684,415	180,920		64,936,258
1992 - 1993	66,012,320	3,971,610	581,165	188,655		70,753,750
1993 - 1994	70,580,682	4,156,137	647,480	198,704		75,583,003
1994 - 1995	78,589,558	3,373,147	628,596	177,081		82,768,382
1995 - 1996	83,763,230	4,158,612	684,885	12,711,571		101,318,298
1996 - 1997	88,631,324	3,839,562	675,961	12,596,802		105,743,649

(1) Includes depreciation

Teachers' Retirement System

Contribution Rates

EMPLOYEE

1937 - 1973	5.000%
1973 - 1975	5.125%
1975 - 1977	6.125%
1977 - 1983	6.187%
1983 -	7.044%

EMPLOYER

1937 - 1945	NONE
1945 - 1959	3.750%
1959 - 1969	4.000%
1969 - 1971	4.500%
1971 - 1975	5.125%
1975 - 1977	6.250%
1977 - 1981	6.312%
1981 - 09/30/81	6.432%
10/01/81 - 06/30/83	6.463%
1983 - 1985	7.320%
1985 - 1989	7.428%
1989 - 1993	7.459%
01/01/94 -	7.470%

Unless otherwise noted, contribution rate changes occur on July 1.

Teachers' Retirement System

Membership

Period Ended	Active Members	Inactive Vested Members	Inactive Non-vested	Total
June 30, 1988	15,041	1,025	3,444	19,510
June 30, 1989	15,087	1,074	3,765	19,926
June 30, 1990	15,702	1,137	4,080	20,919
June 30, 1991	16,281	1,102	4,469	21,852
June 30, 1992	16,643	1,167	4,890	22,700
June 30, 1993	17,211	1,171	5,375	23,757
June 30, 1994	17,439	1,113	5,761	24,313
June 30, 1995	18,062	1,130	6,201	25,393
June 30, 1996	18,332	1,012	6,050	25,394
June 30, 1997	18,222	1,173	7,560	26,955

Retired Members and Benefit Recipients

Period Ended	Retirement	Survivors	Disability	Child Benefits	Total
June 30, 1988	5,475	320	249	59	6,103
June 30, 1989	5,743	332	255	59	6,389
June 30, 1990	5,903	334	265	56	6,558
June 30, 1991	5,882	339	261	46	6,528
June 30, 1992	6,042	343	263	47	6,695
June 30, 1993	6,227	355	267	50	6,899
June 30, 1994	6,531	358	271	38	7,198
June 30, 1995	6,800	365	274	35	7,474
June 30, 1996	7,011	370	273	34	7,688
June 30, 1997	7,212	366	279	44	7,901

LOCATION OF BENEFIT RECIPIENTS

Alabama	11
Alaska	25
Arizona	157
Arkansas	12
California	141
Colorado	65
Connecticut	3
Florida	36
Georgia	8
Hawaii	5
Idaho	105
Illinois	13
Indiana	5
Iowa	9
Kansas	10
Kentucky	1
Louisiana	2
Maine	4
Maryland	4
Massachusetts	5
Michigan	8
Minnesota	58
Mississippi	1
Missouri	20
Montana	6,170
Nebraska	15
Nevada	65
New Jersey	2
New Mexico	21
New York	14
North Carolina	13
North Dakota	78
Ohio	11
Oklahoma	14
Oregon	140
Pennsylvania	9
South Carolina	3
South Dakota	29
Tennessee	8
Texas	37
Utah	38
Vermont	2
Virginia	12
Washington	276
West Virginia	2
Wisconsin	26
Wyoming	56
APO	4
Australia	2
Canada	16
England	1
Holland	1
Japan	1
Khaldiya Kuwai	1
New Zealand	1
Puerto Rico	1
Scotland	2
TOTAL	*7,779

*122 receipents recieve two benefits.

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